

CLAIMS:

1. A method comprising:
sensing a position within a transurethral catheter of an ablation needle extended from the catheter to deliver ablation energy to a target tissue site within a prostate of a patient; and
activating an advisory if the sensed position of the ablation needle indicates that the ablation needle is not fully retracted within the catheter.
2. The method of claim 1, further comprising confirming that the needle is fully retracted when the sensed position of the ablation needle indicates that the ablation needle is fully retracted within the catheter.
3. The method of claim 2, further comprising:
repositioning the needle within the prostate; and
delivering ablation energy to a second target tissue within the prostate via the repositioned ablation needle.
4. The method of claim 2, wherein confirming that the needle is fully retracted comprises deactivating the advisory.
5. The method of claim 1, further comprising sensing the position of the ablation needle after delivery of the ablation energy.
6. The method of claim 5, further comprising the step of activating the advisory until the sensed position of the ablation needle indicates that the ablation needle is fully retracted within the catheter.

7. The method of claim 1, further comprising penetrating a wall of a urethra of the patient with the ablation needle, extending the ablation needle into the prostate, and delivering the ablation energy to the prostate via the ablation needle.
8. The method of claim 1, wherein the ablation energy includes electrical current selected to kill cells within the prostate.
9. The method of claim 1, further comprising presenting the sensed position of the ablation needle.
10. The method of claim 8, further comprising presenting the sensed position of the ablation needle with an audible indicator.
11. The method of claim 1, further comprising continually activating the advisory until the sensed position of the ablation needle is fully retracted within the catheter.
12. The method of claim 1, further comprising presenting the sensed position of the ablation needle with a visual indicator.
13. The method of claim 11, further comprising presenting the position of the ablation needle with at least one of a light, colored lights, flashing lights, graphical images and text messages.
14. The method of claim 1, further including presenting the sensed position of the ablation needle on a user interface.
15. The method of claim 1, further including presenting the sensed position of the ablation needle on a handle through which a user controls the position of the ablation needle and the application of ablation energy.

16. The method of claim 1, further including presenting the sensed position of the ablation needle on an ablation energy generator.
17. A transurethral ablation system comprising:
 - a transurethral catheter;
 - an ablation needle extendable from the catheter to penetrate a prostate of a patient;
 - an ablation energy generator to deliver ablation energy to the prostate via the ablation needle; and
 - a needle position indicator to present an advisory when the needle is not fully retracted within the catheter.
18. The system of claim 17, further comprising a needle position sensor to sense the position of the ablation needle.
19. The system of claim 18, wherein the needle position sensor senses the extent to which the ablation needle is retracted or deployed from the catheter.
20. The system of claim 18, wherein the needle position sensor includes one of a mechanical sensor, an electrical sensor, a magnetic sensor, an optical sensor, a resistive sensor, and a capacitive sensor.
21. The system of claim 18, wherein the needle position sensor is a continuous position sensor.
22. The system of claim 17, wherein the needle position indicator confirms when the ablation needle is fully retracted within the catheter.
23. The system of claim 17, wherein the needle position indicator presents whether the ablation needle is fully deployed from the catheter.

24. The system of claim 17, wherein the needle position indicator presents the extent to which the ablation needle is deployed from the catheter.
25. The system of claim 17, further including a needle position sensor to directly sense the position of the ablation needle.
26. The system of claim 25, wherein the ablation needle includes an electrically conductive needle and wherein the needle position sensor generates a needle retracted signal when the electrically conductive needle and the needle position sensor come into electrical contact.
27. The system of claim 26, wherein the needle position sensor comprises a conductive contact.
28. The system of claim 17, further including a needle position sensor to indirectly sense the position of the ablation needle.
29. The system of claim 28, further including an actuator to advance the ablation needle to penetrate the prostrate of the patient, wherein a position of the actuator corresponds to the position of the ablation needle, and wherein the needle position sensor senses the position of the actuator.
30. The system of claim 29, wherein the needle position sensor comprises a variable resistive element.
31. The system of claim 17, wherein the position indicator comprises an audible tone.
32. The system of claim 31, wherein the audible tone comprises an advisory activated when the needle is to be repositioned within the prostrate if the position of the ablation needle is not fully retracted within the catheter.

33. The system of claim 32, further comprising a controller to determine a time to reposition the ablation needle within the prostrate.

34. The system of claim 33, wherein the controller is connected to receive a needle position signal from the needle position sensor, and wherein the controller activates the advisory at the determined time if the needle position signal does not correspond to a needle that is fully retracted within the catheter.

35. The system of claim 34, wherein the controller generates the advisory until the needle position signal corresponds to a needle that is fully retracted within the catheter.

36. The system of claim 35, wherein the determined time is after delivery of the ablation energy.

37. The system of claim 17, wherein the position indicator comprises at least one of lights, colored lights, flashing lights, audible tones, alarms, graphical images and text messages.

38. The system of claim 17, wherein the position indicator is located on a handle through which a user controls the position of the ablation needle and the application of ablation energy.

39. The system of claim 17, wherein the position indicator is located on the ablation energy generator.

40. The system of claim 17, wherein the position indicator includes at least one of a graphical image and a text message presented on a user interface.

41. The system of claim 17, wherein the user interface presents a text message indicating the extent to which the ablation needle is deployed or retracted.

42. The system of claim 17, further including a position sensor to continuously sense the position of the needle within the catheter, and wherein the position indicator continuously presents the sensed position of the needle.

43. A transurethral ablation system comprising:
ablation means for delivering ablation energy to a first target tissue site within a prostate of a patient;
means for deploying and retracting the ablation means within the prostate;
means for sensing a position of the ablation means within a catheter from which the ablation means is deployed and retracted; and
means for activating an advisory after delivery of the ablation energy until the sensed position indicates that the ablation means is fully retracted.

43. The transurethral ablation system of claim 42, further comprising:
means for repositioning the ablation means within the prostate such that the ablation means is aligned with a second target tissue site within the prostate; and
wherein the ablation means is further for delivering the ablation energy to the second target tissue site.

44. The transurethral ablation system of claim 42, further comprising means for confirming when the ablation means is fully retracted.

45. The transurethral ablation system of claim 44, wherein the means for confirming includes at least one of a visual indicator, an audible indicator, a graphical image and a text message.

46. The transurethral ablation system of claim 44, wherein the means for confirming comprises means for deactivating the advisory.

47. The transurethral ablation system of claim 42, wherein the means for activating an advisory comprises means for activating an audible alarm.

48. The transurethral ablation system of claim 42, wherein the means for activating an advisory comprises means for activating a visual indicator including at least one of lights, colored lights, flashing lights, graphical images and text messages.

49. The transurethral ablation system of claim 42, further comprising means for continuously presenting the sensed position of the ablation needle during an ablation procedure.

50. A computer-readable medium containing instructions for causing a processor to:
control delivery of ablation energy to a target tissue site within a prostate of a patient via an ablation needle extended from a transurethral catheter deployed within the target tissue site;

receive an ablation needle position signal indicative of a position of the ablation needle within the catheter;

activate an advisory if the ablation needle position signal indicates that the position of the ablation needle is not fully retracted within the catheter after delivery of the ablation energy; and

continuously activate the advisory until the ablation needle position signal indicates that the position of the ablation needle is fully retracted within the catheter.